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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,915	03/26/2004	Miroslav R. Petrov	6570P026	6336

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EXAMINER	
HASSAN, RASHEDUL	

ART UNIT	PAPER NUMBER
2179	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/814,915	PETROV ET AL.	
	Examiner	Art Unit	
	Rashedul Hassan	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-15,17-20,22-25 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-15,17-20,22-25 and 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/16/2007 has been entered.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claims 25 recites a "computer-readable medium" in line 2. The specification does not provide proper antecedent basis for the claimed "computer-readable medium". It is noted that paragraph [0068] mentions the terminology "**system**-readable medium" that store instructions and/or data. The Examiner suggests amending the specification to recite "computer-readable medium" instead of "system-readable medium" to provide proper antecedent basis for the claimed terminology in the specification.

Claim Objections

Claim 20 recites the limitation "the graphical user interface" in lines 8-9 and 10-11. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 10-12, 14-15, 18-20, 23-25, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ismael et al. (US 6,356,931) hereinafter Ismael, in view of E et al. (US 2004/ 0019639 A1) hereinafter E.

For claims 1 (method), 15 (apparatus), 20 (system) and 25 (an article of manufacture), Ismael teaches a computer-implemented method employed within a network having a cluster architecture (Fig. 1, column 3 line 40-53), comprising:

displaying a representation of a plurality of management beans (MBeans) (*column 2 lines 36-38, MBean 29 in Fig. 3*) registered with an MBean server (*Framework 24 in Fig. 3, also column 5 line 5*) on a graphical user interface of a computing device (*browser of managed station 20 in Fig. 1*), wherein each of the displayed MBeans represents a manageable resource within a cluster of application servers (*Fig. 3, column 5 lines 53-54*) having a group of server nodes (*i.e., the term "cluster architecture" is not defined in the disclosure, but only an exemplary cluster architecture is illustrated. Therefore, without reading limitations from the specification into the claims, a broadest reasonable interpretation of the term "cluster architecture" in the context of a network is a plurality of computers inter-connected and grouped together in a network. Therefore, Fig. 1 of Ismael illustrates "a network having a cluster architecture" (Ismael: 41-53). Ismael further mentions that the stations 3, 4 and 5 are servers (c3:5-6, c3:1-c4:3). Therefore, Ismael also teaches that the displayed management beans represent a manageable resource "within a cluster of application servers having a group of server nodes", as recited in claim 1*);

selecting one of the plurality of MBeans displayed in the graphical user interface (*Summary of the invention, column 2 lines 31-43*); and

accessing an attribute of the selected MBean with the graphical user interface (*column 2 lines 23-28*).

Ismael does not explicitly teach that the cluster of application servers have a dispatcher, and that the application servers are in communication with a central service having a locking service and a messaging service. In other words, the architecture of the cluster of application servers in Ismael is different than the architecture of the cluster of application servers claimed. The specification does not provide any limiting definition for the terminology "dispatcher" utilized in the claim. Referring to Fig. 12, paragraph [00072] mentions, "*In one embodiment, dispatcher 1212 distributes service requests from clients to one or more of server nodes 1214, 1216, 1218 based on the load on each of the servers*". Therefore, without limiting, one interpretation of the term "dispatcher" in light of one embodiment disclosed in the specification could be "a module used for load balancing between servers". The specification also does not provide any limiting definition for the terminology "locking service" and "messaging service".

E teaches a cluster of application servers (*see Fig. 1)* having a dispatcher (*i.e., "Distributed data systems may provide for* ***load balancing*** *and fail over to improve the overall quality of service of the system" [0006]*), the application servers (*e.g., 104A and 104B, and/or process 106A and 106B in Fig. 1)* in communication with a central service *(e.g., distributed store 110 in Fig. 1*) having a locking service *(e.g., lock mechanism 114 in Fig. 1)* and a messaging service (*see [0039] for messaging service for obtaining a token).*

Therefore, Ismael and E together teaches all the limitations of the independent claims. Ismael teaches management of network resources using remote manipulation of management beans (Mbeans) as claimed and E teaches a distributed data system having the clustered network architecture as claimed. Since management of network resources is desirable for any system no matter what the purpose and/or network architecture of the system, it would have been obvious to a person of ordinary skill in the art to employ the management technique of Ismael with the distributed data system of E so that the resources of the distributed data system can be monitored and managed efficiently, especially since Ismael explicitly suggests that his invention can be used in a network of any desired architecture (*see Ismael column 3 lines 51-53)*.

Regarding claim 20, it is further noted that the claim has been interpreted as if 35 U.S.C 112, sixth paragraph, has been invoked only for "a means for displaying" (*i.e., a graphical user interface, which is taught by Ismael*) and "a means for selecting" (*i.e., a pointing device, also implicitly taught by Ismael*) clauses of the claim and not for "a means for accessing" (*i.e. a graphical user interface, which is also taught by Ismael)* clause of the claim.

For claims 10 and 11, Ismael implicitly teaches selecting one of the plurality of displayed MBeans with a pointing device or a keyboard (*9 in Fig. 2*).

Claims 12 (method), 18 (apparatus), 23 (system) and 29 (article of manufacture) are directed to accessing an attribute of an MBean representing a cluster manager of the network. However, the specification does not provide any limiting definition for the phrase "cluster manager" utilized in the claim. Referring to Fig. 12, paragraph [00077] mentions that *"each server node (e.g., 1218, 1228) includes...a cluster manager 1242, 1252 for communicating with messaging service 1204"*. Therefore, without limiting, one interpretation of the term "cluster manager" in light of one embodiment disclosed in the specification is "a component or resource of the application servers used for communicating messages between the application servers and the central services of the system. As pointed out in the rejection of claim 1, E teaches that application servers can request locked access to a portion of primary data 112 from the distributed store 110 and the distributed store 110 can send a reply message to the application server including a token for the portion if the portion is not locked for another server (*see [0039]*). Therefore, E teaches a component or resource of the application servers used for communicating messages between the application servers and the central services of the system. Since Ismael teaches that all resources of a system worth monitoring can be represented as MBeans and since all MBeans can be represented and their attributes accessed using a graphical user interface, it would have been obvious to those of ordinary skill in the art to combine the teaching of E and Ismael for accessing an attribute of an MBean representing a cluster manager of the network. The motivation for such combination would have been to monitor and manage lock requests within the distributed data system.

For claims 14 (method), 19 (apparatus), 24 (system) and 30 (article of manufacture), Ismael teaches invoking an operation of the selected MBean with the graphical user interface (*column 2 lines 29-30*).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ismael in view of E, further in view of Yeluripati et al. (US 7,086,065) hereinafter Yeluripati.

For claim 13, Ismael does not teach accessing a queue size attribute of the MBean representing the cluster manager to determine a number of requests waiting in the queue. However, using a queue to process requests is a well-known mechanism used in the art. E teaches that a request for lock may be queued by lock mechanism 114 (*see column 4 lines 2-3*). Yeluripati teaches a functional bean that receives client requests from a queue to service the request in a first come first serve basis (*column 7 lines 45-54*). Therefore, it would have been obvious to use a queue to service the requests in a MBean representing the cluster manager and subsequently access the queue size attribute of the MBean to determine a number of requests waiting in the queue. The motivation for using a queue would have been to serve the requests in a first come first serve basis (*Yeluripati, column 7 lines 45-54*) and the motivation for accessing the queue size attribute would have been to monitor the cluster manager performance.

Claims 3-9, 17, 22, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ismael in view of E, further in view of Hessmer et al. (US2002/0112044) hereinafter Hessmer.

Ismael and E do not teach displaying a representation of a plurality of hierarchically organized MBeans as a tree structure having a root node, wherein the root node is an MBean representing the cluster of application servers. they do not teach that the tree structure further includes one or more server nodes depending from the root node and showing kernel nodes, library nodes and service nodes depending from each of the one or more server nodes, wherein all these nodes are MBeans. Hessmer teaches a method and system for performing remote diagnostics on a process data access server, wherein he teaches displaying a set of diagnostic roots in the form of a hierarchical tree structure in the left pane of the graphical user interface associated with the diagnostic utility 100 (*Fig. 4, [0056]*). These diagnostic roots are elements to be monitored organized according to the type of elements. Hessmer's hierarchical tree structure organizes the presentation of the diagnostic roots having a root representing the cluster of servers and then showing a list of servers depending from the root and further showing various diagnostic roots depending from each of the servers. Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate this aspect of Hessmer's teaching with that of Ismael and E to represent the plurality of MBeans, each representing a manageable resource, in a hierarchical tree structure and

organized in groups under respective server nodes as kernel, service and library nodes respectively based on the type of the resource. The motivation for using a hierarchical tree structure for representing the MBeans in various groups would have been to provide scalability of elements to expose lower levels and their associated information and further to provide ready access to a broad spectrum of diagnostic data via a graphical user interface (Hessmer, [0056]).

Response to Arguments

The Examiner acknowledges and appreciates the amendment filed on 10/16/2007, which has been fully considered.

Objection to the Specification:

In the Final Office Action dated July 16, 2007, the Examiner raised objection to the specification as failing to provide proper antecedent basis for the claimed terminology "electronically accessible medium" recited in Claim 25. In response, the Applicant pointed out paragraph [0068] of the specification, which describes forms of "memory" and argued that the description of memory in the specification, among others, supports the limitation "electronically accessible medium". However, since the Applicant has amended Claims 25-30 to recite "computer-readable medium", the previous objection raised by the Examiner is deemed moot due to the amendment. However, the specification still does not provide proper antecedent basis for the current terminology "**computer**-readable medium" (although, it is noted that paragraph [0068] mentions the

terminology "**system**-readable medium" that store instructions and/or data). Therefore, the question becomes whether non-statutory embodiments would be fairly conveyed to one of ordinary skill in the art given the terminology utilized. In this instance, it would appear, based on paragraph [0068] in the specification and Applicant's remarks, to only be reasonable to interpret "computer-readable medium" as fairly conveying hardware storage and forms of physical article media (e.g., the various types of "system-readable medium" that store instructions and/or data, as mentioned in paragraph [0068]) to one of ordinary skill in the art. Furthermore, in order to further clarify the records for this application, the Examiner would like to point out that in the amendment filed 04/24/2007, the Applicant deleted portions of the original specification (e.g., "System inter connection 1170 may include...other propagated signal lines" in [0069]) removing any reference to signal or carrier waves (see page 9 of the remarks) which was the basis for the rejection under 35 U.S.C 101 made in the Office Action of 02/08/2007. For purposes of examination, the deletion was treated as an explicit act to remove such non-statutory embodiments from the scope of the claims and therefore, the rejections under 35 U.S.C 101 were subsequently withdrawn in the Final Office Action of 07/16/2007. In this Office Action, the same deletion by the Applicant is also being treated as an explicit act to remove such non-statutory embodiments from the scope of the claimed "computer-readable medium".

Response to Arguments for Claim Rejections under 35 U.S.C 102

In response to the Examiner's argument that the term "cluster architecture" is not defined (i.e., no limiting definition) in the disclosure, the Applicant pointed out Fig. 12 and the accompanying description appearing in paragraphs [00071]-[00077] on pages 32-34 of the specification. Applicant argued that Fig. 12 and the accompanying description support the Applicant's position that Ismael does not disclose a cluster architecture "**as that term is defined in the application**". However, the Examiner disagrees with the Applicant that Fig. 12 and the accompanying description in the specification pointed out by the Applicant provides "an explicit definition" or "a limiting definition" of the term "cluster architecture". It appears to the Examiner that Fig. 12 and the accompanying description do not provide a definition of the term "cluster architecture", but merely provides "an **exemplary** application server architecture" as explicitly stated in paragraph [00070] on page 32, "*An exemplary application server architecture will now be described, followed by a detailed description of the management architecture and associated processes*". Nevertheless, the Applicant has amended independent claims 1, 15, 20, and 25 to recite new limitations having support in Fig. 12 and paragraphs [00071]-[00077]. However, Applicant's arguments with respect to independent claims 1, 15, 20 and 25 have been considered but are moot in view of the new ground(s) of rejection.

Response to Arguments for Claim Rejections under 35 U.S.C 103

For dependent claims 3-9, 13, 17, 22 and 28, Applicant only argued, "nether Yeluripati or Hessmer cure the deficiencies of Ismael for the same reasons that Applicant has previously presented" and submits that the dependent claims are allowable, at least in part, because they depend from allowable independent Claims 1, 15, 20 and 25 and because of their additional limitations. Since, the independent claims are not allowable in view of the new ground(s) of rejection, Applicant's arguments with respect to dependent claims 3-9, 13, 17, 22 and 28 are also moot.

Response to Request for Claims 20-24 be interpreted under 35 U.S.C 112, Sixth Paragraph

The Applicant mentions amending claims 20-24 to remove references to the graphical user interface and requested that claims 20-24 be interpreted under 35 U.S.C 112, sixth paragraph. The Examiner notes that for independent claim 20, although the amendment removed the reference to the "graphical user interface" which constituted sufficient structure or material modifying the phrase "a means for displaying", the amendment failed to remove the reference to the "graphical user interface" modifying the phrase "a means for accessing". Thus, the claim has been interpreted as if 35 U.S.C 112, sixth paragraph, has been invoked only for "a means for displaying..." and "a means for selecting..." clauses of the claim and not for "a means for accessing..." clause of the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashedul Hassan whose telephone number is 571-272-9481. The examiner can normally be reached on M-F 7:30AM - 4PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

(Rashedul Hassan)

WEILUN LO
SUPERVISORY PATENT EXAMINER